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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,286	05/30/2001	Jialin Shen	3926.029	7313
7590 08/09/2004			EXAMINER	
Stephan A. Pendorf Pendorf & Cutliff 5111 Memorial Highway Tampa, FL 33634-7356			CAIN, EDWARD J	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 08/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/870,286

Applicant(s)

SHEN, JIALIN

Examiner

Edward J. Cain

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27 is/are allowed.
- 6) ☒ Claim(s) 14-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

The amendment received July 22, 2004 has been made of record. Claims 14-27 are pending.

The finality of the previous office action is hereby withdrawn.

The indicated allowability of claims contained in the previous office action is hereby withdrawn.

The rejections under 35 USC 102 and 103 contained in the previous office action are withdrawn in view of applicants' amendments.

Claims 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims recite "rounded off particles" and particle sizes for the binder. The compositions are claimed as comprising binder and a solvent for the binder. It is not seen how particles will exist in solution. Appropriate clarification is required.

Claim 20 recites the limitation "powder" in line 2. There is insufficient antecedent basis for this limitation in the claim.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-23 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Lent et al.

Lent et al disclose compositions useful for ink jet printing. These compositions are taught as comprising resin compositions, photoinitiator and organic carrier. The resin compositions and organic carrier are seen as equivalent to applicant's claimed "binder" and "solvent". The inks produced from these components are taught as suitably comprising up to 90% by weight carrier.

Regarding applicants limitations to the filler materials in instant claims 17, 22 and 23, these limitations only apply when the fillers are present. The claims involved, however, make it clear that fillers are optional.

Regarding applicant's limitations to "ash poor" and "flowable in an autoclave", these limitations are seen as inherent to the compositions of the reference since no substantial ash producing components are present and the compositions are flowable at room temperature.

Regarding applicants limitation to "rounded off particles" and particle size of the binder, it is the position of the examiner that binder particles will no longer exist when binder is mixed with a solvent as claimed.

Applicant's recitation of an intended use for 3-D printing is not seen as imparting patentability to the claims since no implicit limitations obviating the prior art are seen.

Claims 14-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Salvin et al.

Salvin et al disclose photosensitive compositions comprising water as solvent, water soluble binders, photoinitiator and filler materials.

Regarding applicants limitations to the filler materials in instant claims 17, 22 and 23, these limitations only apply when the fillers are present. The claims involved, however, make it clear that fillers are optional.

Regarding applicant's limitations to "ash poor" and "flowable in an autoclave", these limitations are seen as inherent to the compositions of the reference since no substantial ash producing components are present and the compositions are flowable at room temperature.

Regarding applicants limitation to "rounded off particles" and particle size of the binder, it is the position of the examiner that binder particles will no longer exist when binder is mixed with a solvent as claimed.

Claims 14-24, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Fanger et al.

Fanger et al disclose photopolymerizable aqueous compositions comprising water soluble binder polymers and water insoluble resins. The water soluble binder polymers are taught by example to be present in relative proportions of less than 10%. These compositions are further taught as comprising photoinitiators and crosslinking agents. The water insoluble resins are seen as meeting applicant's limitation to fillers and these resins are taught as forming spheres and being surrounded by a layer of binder polymer (column 3, lines 33-38).

Art Unit: 1714

Regarding applicants limitations to the filler materials in instant claims 22 and 23, these limitations only apply when the fillers are present. The claims involved, however, make it clear that fillers are optional.

Regarding applicant's limitations to "ash poor" and "flowable in an autoclave", these limitations are seen as inherent to the compositions of the reference since no substantial ash producing components are present and the compositions are flowable at room temperature.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fanger et al.

Fanger et al disclose photopolymerizable compositions as discussed above. The reference teaches that PVP is "a very useful binder" among several others.

It would, therefore, have been obvious to one of ordinary skill in the art to select PVP as the water soluble binder in the compositions of the reference.

Claim 27 is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward J. Cain whose telephone number is (571) 272-1118. The examiner can normally be reached on M-F from 10:00 to 6:00.

Art Unit: 1714

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on 571 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edward J. Cain  
Primary Examiner  
Art Unit 1714

A handwritten signature in black ink, appearing to read 'E. Cain', is positioned below the printed name and title.